REMARKS

Applicants have carefully reviewed the arguments presented in the Office Action and respectfully request reconsideration of the claims in view of the remarks presented below.

Claims 1, 18, and 21 have been amended. Claims 16 and 20 have been cancelled without prejudice. Thus, Claims 1-15, 17-19 and 21-22 are pending in the application.

Non-statutory Double Patenting Rejections

Claim 17 was rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 19 of U.S. Patent No. 6,360,038. In view of Farries (U.S. 5,778,119). Claim 19 was not rejected for any other reason, and thus appears to be allowable but for the non-statutory obviousness-type double patenting. Applicants hereby submit a Terminal Disclaimer pursuant to 37 C.F.R. § 1.321(c) and 37 C.F.R. § 3.73(b) to overcome this rejection, and respectfully request allowance of this claim.

Claim 19 was rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 6,360,038. Claim 17 was not rejected for any other reason, and thus appears to be allowable but for the non-statutory obviousness-type double patenting. Applicants hereby submit a Terminal Disclaimer pursuant to 37 C.F.R. § 1.321(c) and 37 C.F.R. § 3.73(b) to overcome this rejection, and respectfully request allowance of this claim.

Rejections under 35 U.S.C. § 102

Claim 18 was rejected under 35 U.S.C. § 102(b) as being anticipated by Farries (U.S. 5,778,119). Applicants respectfully traverse this rejection.

Claim 18 has been amended to more particularly point out that each of the optical fibers in the add drop multiplexer has a core and cladding layer, with each optical fiber

having a perturbation formed therein and at least one of the perturbations is formed in the cladding of one of the optical fibers. Amended Claim 18 also recites that the fibers are positioned close together, but without overlapping the perturbations to form a coupling region located between the first and second perturbations in a lengthwise direction, as is recited in claim 19, which has been indicated to be approvable but for a non-statutory obviousness-type double patenting rejection. Although Farries does disclose forming one or more long period gratings within the core of an optical fiber, Farries neither teaches nor even suggests forming a perturbation in the cladding of one of the optical fibers. Accordingly, Applicants believe that Claim 18, as amended, is patentable over Farries, and respectfully requests allowance.

Claims 21-22 were rejected under 35 U.S.C. § 102(b) as being anticipated by Epworth (U.S. 4,761,833). Applicants respectfully traverse this rejection.

Figure 5 of Epworth discloses:

> [A] cladding mode tap comprising a tap fiber 20 and main network fiber 21. The tap fiber 20 has a silica core 22 and silicone cladding 23. The network fiber 21 has a silica core 24, silica cladding 25, and a silicone cladding coding 26. In the region of the contact of fibers 20 and 21 the silicone cladding 23 and 26 are not present. Thus, light coupled from the core 24 to cladding 25 of fiber 21 can be coupled to the core of the tap fiber 20 as indicated by the arrows. Col. 5, ll. 2-10.

The structure of Epworth is significantly different from that recited and claimed by Applicants in claim 21. Claim 21 has been amended to clearly point out that Applicants are claiming an optical device comprising a planar optical waveguide having a second index of refraction less than the first index of refraction wherein the cladding of the planar optical fiber is positioned closely to the optical waveguide forming a coupling

region between the cladding of the optical fiber and the planar optical waveguide thus that the cladding mode transmitted in the cladding of the optical fiber excites a mode in the planar optical waveguide. Epworth neither teaches nor suggests a planar optical waveguide.

The term "planar waveguide" is a synonym for "slab-dielectric waveguide." *See* Exhibit A attached hereto. A slab-dielectric waveguide is defined as:

> [A]n electro-magnetic waveguide (a) that consists solely of dielectric materials, (b) in which the dielectric propagation medium has a rectangular cross-section, (c) that has a width, thickness and refractive indices that determine the operating wavelength and the modes the guide will support beyond the equilibrium length, (d) that may be cladded, protected, distributed and electronically controllable, and (e) that may be used in various applications ....*See* Exhibit B attached hereto.

None of the drawings in Epworth, nor any of the text associated with those drawings, depict or describe a planar optical waveguide. Rather, the only structure disclosed or illustrated in Farries is an optical fiber having a cylindrical cross section. For these reasons, Applicants respectfully submit that claims 21-22 are patentable over Epworth, and respectfully request their allowance.

Rejections under 35 U.S.C. § 103

Claims 1-16, and 20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Farries (U.S. 5,778,119) in view of Kashyap (U.S. 6,104,852). Applicants respectfully traverse these rejections.

Claim 1 was amended to recite an optical device having an input fiber and a target fiber, with first and second perturbations formed in the core of each of the fibers respectively, wherein at least one of the first and second perturbations is in the cladding and the first perturbation and the second perturbation do not overlap, and have a coupling region located between the first and second perturbations in a lengthwise direction. Thus, amended claim 1 is similar to claim 19, which has already been found to be approvable

but for a non-statutory obviousness rejection, as set forth above. Amended claim 1 differs from claim 19 only to the extent that claim 19 recites that one of the first and second perturbations is in the cladding and the other is in the core, while amended claim 1 recites that at least one of the first and second perturbations is in the cladding. Thus, Applicants believe that amended claim 1, and claims 2-15 dependent therefrom, are patentable over the cited art, and respectfully request that they be allowed.

Claims 16 and 20 are hereby cancelled without prejudice.

CONCLUSION

Applicant has carefully reviewed the arguments presented in the Office Action and respectfully requests reconsideration of the claims in view of the remarks presented. In light of the above amendments and remarks, Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Should the Examiner have any questions concerning the above amendments and arguments, or any suggestions for further amending the claims to obtain allowance, Applicant requests that the Examiner contact Applicants attorney, John Fitzgerald, at 310-242-2667.

Please charge any additional fees payable in connection with this Amendment to our Deposit Account No. 06-2425.

Respectfully submitted,

FULWIDER PATTON LEE & UTECHT, LLP

Date: 11/19/03 By: _____

John K. Fitzgerald
Registration No. 38,881

JKF:vmm
Enclosures

Howard Hughes Center
6060 Center Drive, Tenth Floor
Los Angeles, CA 90045
Telephone: (310) 824-5555
Facsimile: (310) 824-9696
Customer No. 24201

planar waveguide

planar waveguide: *Synonym* **slab-dielectric waveguide.**

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P [A-Z]

Back to O, Forward to Q

● = Term carried over from FS-1037C
○ = New term from open literature
■ = New term from ANSI T1 sources

- PABX
- packet
- packet assembler/disassemb (PAD)
- packet entry event
- packet exit event
- packet filter
- packet format
- packet header
- packet Internet groper
- packetization interval
- packet layer reference event
- packet mode
- packet-mode terminal
- packet sniffer
- packet stream
- packet-switched data transmission service
- packet switching

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slab-dielectric waveguide

slab-dielectric waveguide: An electromagnetic waveguide (a) that consists solely of dielectric materials, (b) in which the dielectric propagation medium has a rectangular cross section, (c) that has a width, thickness, and refractive indices that determine the operating wavelength and the modes the guide will support beyond the equilibrium length, (d) that may be cladded, protected, distributed, and electronically controllable, and (e) that may be used in various applications, such as in integrated optical circuits (IOCs) in which their shape is geometrically more convenient than the optical fibers that are circular in cross section, that are used in fiber optic cables for long-distance transmission. *Note:* Their principle of operation is the same as that for optical fibers that are circular in cross section. [After 2196]. *Synonym* **planar waveguide.**

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